



# JAMES MILLEN

## MANUFACTURING COMPANY, INC.



*"Designed for Performance"®*

### NO. 90651-A GRID DIP METER

The Millen No. 90651-A Grid Dip Meter features a transistor d.c. amplifier, and taut band meter.

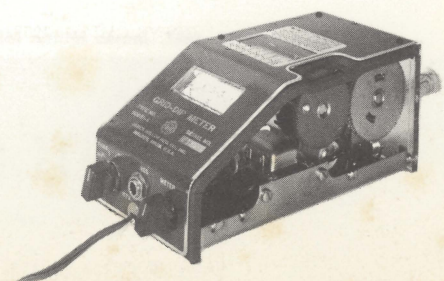
The No. 90651-A has a transistor d.c. amplifier to increase sensitivity. It provides full scale meter reading at all frequencies from 1.7 to 300 mc. It has a modern, taut band meter to eliminate any possibility of the meter ever becoming "sticky." These additions are made while still maintaining all of the features which have made the Millen No. 90651 Grid Dip Meter so thoroughly reliable it has become the standard of the industry. It uses the same stable oscillator without spurious dips, it has a transformer-type power supply, it has seven coils protected by form fitting molded covers, etc.

The No. 90651-A is supplied complete in a convenient polypropylene carrying case which keeps the coil/probes with the Grid Dip Meter and protects both.

Five additional coils are available for extending the range to 165 KC.

The Millen 90651-A Grid Dip Meter is a calibrated stable RF oscillator unit with a transistorized electronic voltmeter to indicate the amplitude of the output. The frequency determining coil is plugged into the unit so that it may be used as a probe.

There are a set of terminals on the internal printed circuit board to provide connections for battery operation where it is desirable to use the unit on antenna measurements and other applications where A.C. power is not available. Compactness has been maintained with improvement in performance and convenience of use while still keeping the unusual ease of reading the dial accurately.

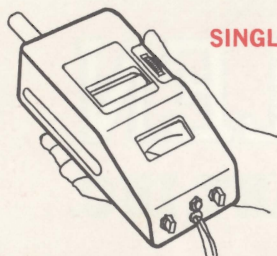


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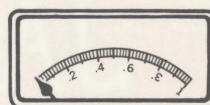


## FEATURES OF 90651-A GRID-DIP METER



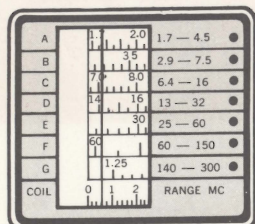
### SINGLE-HAND HELD GRID DIP METER

**CONVENIENT**, one-hand operation permits thumb-setting on any segment of its frequency range; frees second hand.



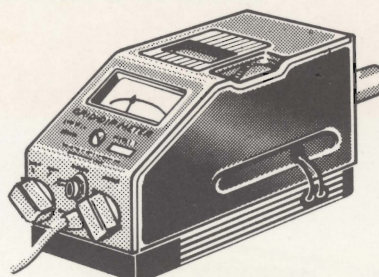
### EASY-TO-READ METER

**RUGGED METER** is placed on the distinctive sloping panel for maximum reading accuracy from the large easy-to-read scale.



### EASY-TO-READ DIAL

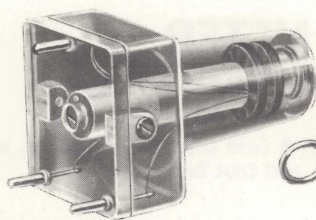
**THE CALIBRATED** dial is a large 205° drum dial which provides seven direct reading scales plus an additional universal scale.



### DESIGNED FOR BATTERY USE

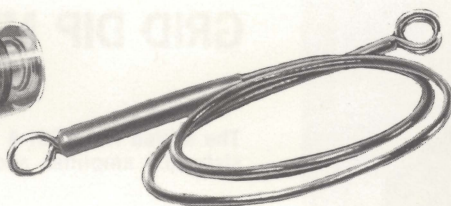
**CONNECTIONS** are available for battery operation when used away from A.C. power lines; i.e. antenna installations and measurements.

## ACCESSORIES FOR USE WITH 90651-A GRID-DIP METER



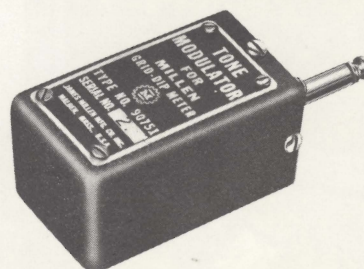
### LOW FREQUENCY COIL/PROBES

- No. 46702 — 925 to 2000 KC.
- No. 46703 — 500 to 1050 KC.
- No. 46704 — 325 to 600 KC.
- No. 46705 — 220 to 350 KC.
- No. 46706 — 165 to 220 KC.



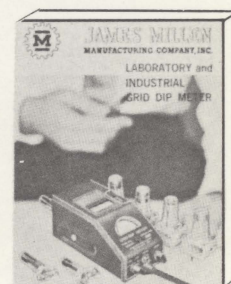
### No. 46721 PROBE

The No. 46721 Probe is used under many conditions where it is difficult to couple directly to the unknown circuit.

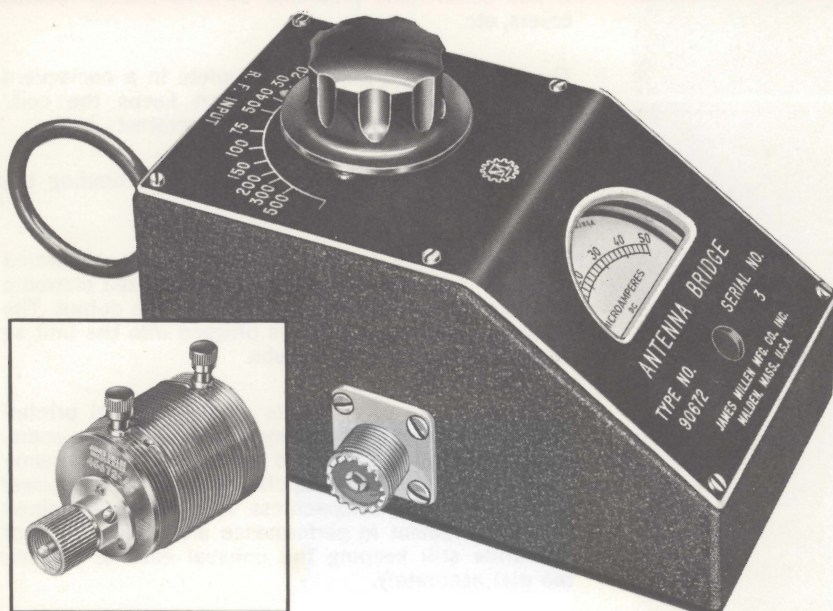


### TO NE MODULATOR

The No. 90751 Tone Modulator plugs into the 'phone jack of a Grid Dip Meter to provide 800 cycle modulation.



Also available are Industrial models of the Grid Dip Meter, Nos. 90662 and 90661. Send for Industrial Grid Dip Bulletin.



## NO. 90672 ANTENNA BRIDGE

The No. 90672 Antenna Bridge is an accurate and sensitive bridge for measuring impedance in the range of 5 to 500 ohms for unbalanced impedance and 20 to 2000 ohms for balanced impedance (using the 4:1 balun illustrated) at radio frequencies up to 140 mc. The variable element in this bridge is an especially designed differential capacitor of high accuracy and permanence of calibration over a wide range of frequencies. This bridge is entirely unique in design as compared to others designed for the same type of service, because it employs no variable resistors. The No. 90672 was designed to use a Grid Dip Meter, such as the Millen No. 90651 A, as source of RF signal.

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JAMES MILLEN

MAIN OFFICE



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AND FACTORY

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